

BOVIN et al  
Appl. No. 10/593,829  
November 24, 2008

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**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-167 (cancelled).

168 (new). A method of effecting change in the surface antigens expressed by a cell or a multi-cellular structure comprising the step of:

contacting a suspension of the cell or multi-cellular structure with a synthetic molecule construct of the structure F-S<sub>1</sub>-S<sub>2</sub>-L for a time and at a temperature sufficient to effect the change;

where:

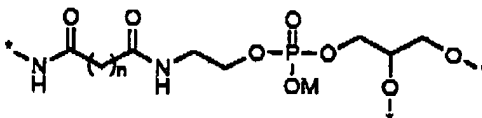
F is a glycotope;

S<sub>1</sub> is a C<sub>3-5</sub>-aminoalkyl selected from the group consisting of: 3-aminopropyl, 4-aminobutyl, or 5-aminopentyl;

S<sub>2</sub> is selected from the group consisting of: -CO(CH<sub>2</sub>)<sub>3</sub>CO-, -CO(CH<sub>2</sub>)<sub>4</sub>CO- (adipate) and -CO(CH<sub>2</sub>)<sub>5</sub>CO-; and

L is a lipid selected from the group consisting of diacyl- and dialkyl-glycerophospholipids.

169 (new). The method according to claim 168 where the construct includes the substructure:



where n = 3 to 5, M is H or a monovalent cation selected from the group consisting of Na<sup>+</sup>, K<sup>+</sup> or NH<sub>4</sub><sup>+</sup>, and \* is other than H.

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170 (new). The method according to claim 168 where the cell or multi-cellular structure is of human or murine origin.

171 (new). The method according to claim 168 where the concentration of the construct in the suspension is in the range 0.1 to 10 mg/mL.

172 (new). The method according to 168 where the suspension of the cell or multi-cellular structure is contacted with the construct at a temperature in the range 2 to 37 °C.

173 (new). The method according to claim 172 where the suspension of the cell or multi-cellular structure is contacted with the construct at a temperature in the range 2 to 25 °C.

174 (new). The method according claim 173 where the suspension of the cell or multi-cellular structure is contacted with the construct at a temperature in the range 2 to 4 °C.

175 (new). The method according to claim 168 where F is selected from the group consisting of GalNAc $\alpha$ 1-3(Fuca1-2)Gal $\beta$ ; Gal $\alpha$ 1-3Gal $\beta$ ; Gal $\beta$ ; Gal $\alpha$ 1-3(Fuca1-2)Gal $\beta$ ; NeuAc $\alpha$ 2-3Gal $\beta$ ; NeuAc $\alpha$ 2-6Gal $\beta$ ; Fuca1-2Gal $\beta$ ; Gal $\beta$ 1-4GlcNAc $\beta$ 1-6(Gal $\beta$ 1-4GlcNAc $\beta$ 1-3)Gal $\beta$ ; Fuca1-2Gal $\beta$ 1-4GlcNAc $\beta$ 1-6(Fuca1-2Gal $\beta$ 1-4GlcNAc $\beta$ 1-3)Gal $\beta$ ; Fuca1-2Gal $\beta$ 1-4GlcNAc $\beta$ 1-6(NeuAc $\alpha$ 2-3Gal $\beta$ 1-4GlcNAc $\beta$ 1-3)Gal $\beta$ ; NeuAc $\alpha$ 2-3Gal $\beta$ 1-4GlcNAc $\beta$ 1-6(NeuAc $\alpha$ 2-3Gal $\beta$ 1-4GlcNAc $\beta$ 1-3)Gal $\beta$ ; Gal $\alpha$ 1-4Gal $\beta$ 1-4Glc; GalNAc $\beta$ 1-3Gal $\alpha$ 1-4Gal $\beta$ 1-4Glc; GalNAc $\alpha$ 1-3GalNAc $\beta$ 1-3Gal $\alpha$ 1-4Gal $\beta$ 1-4Glc; and GalNAc $\beta$ 1-3GalNAc $\beta$ 1-3Gal $\alpha$ 1-4Gal $\beta$ 1-4Glc.

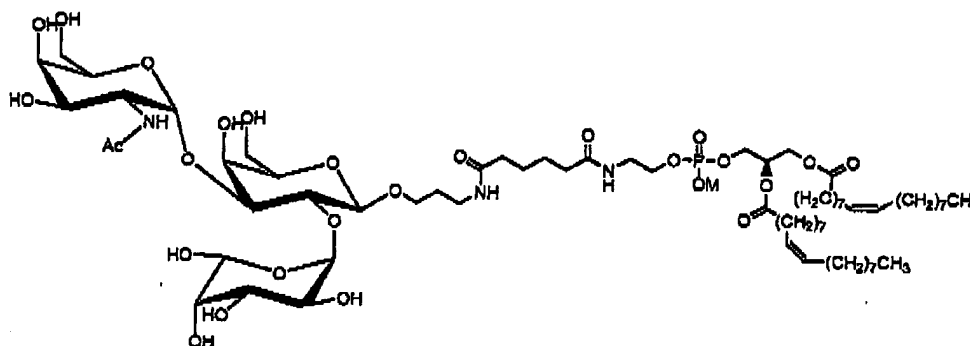
176 (new). The method according to claim 175 where F is selected from the group consisting of the oligosaccharides GalNAc $\alpha$ 1-3(Fuca1-2)Gal $\beta$  and Gal $\alpha$ 1-3(Fuca1-2)Gal $\beta$ .

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177 (new). The method according to claim 168 where  $S_1$  is 3-aminopropyl.

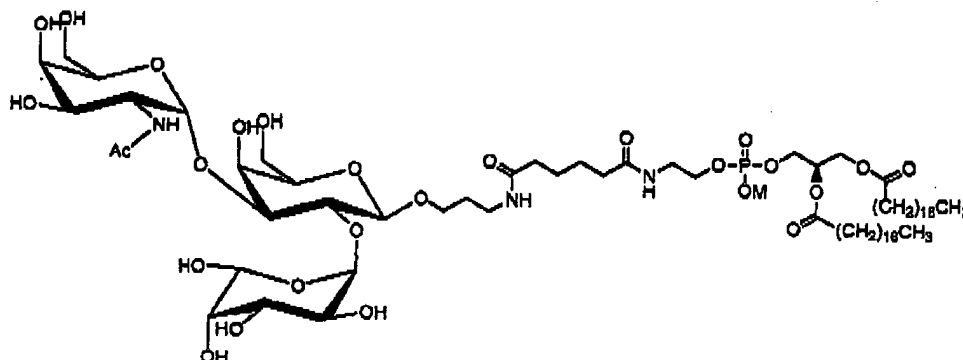
178 (new). The method according to claim 168 where L is selected from the group consisting of 1,2-O-dioleoyl-sn-glycero-3-phosphatidylethanolamine (DOPE) and 1,2-O-distearyl-sn-glycero-3-phosphatidylethanolamine (DSPE).

179 (new). The method according to claim 168 where the construct is:



designated A<sub>tri</sub>-sp-Ad-DOPE (I).

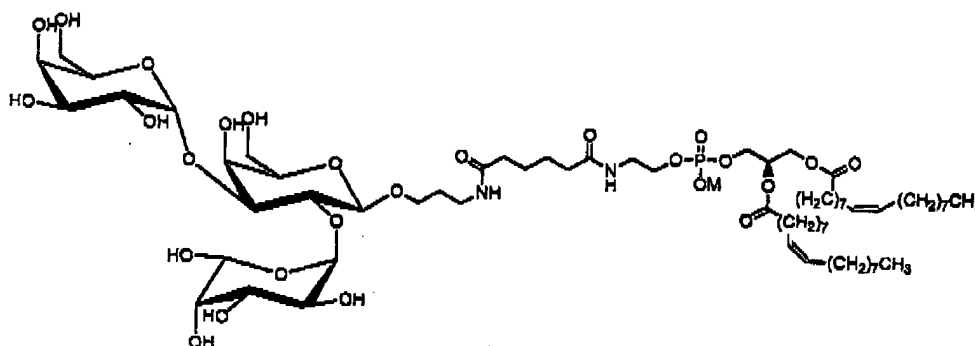
180 (new). The method according to claim 168 where the construct is:



designated A<sub>tri</sub>-sp-Ad-DSPE (III).

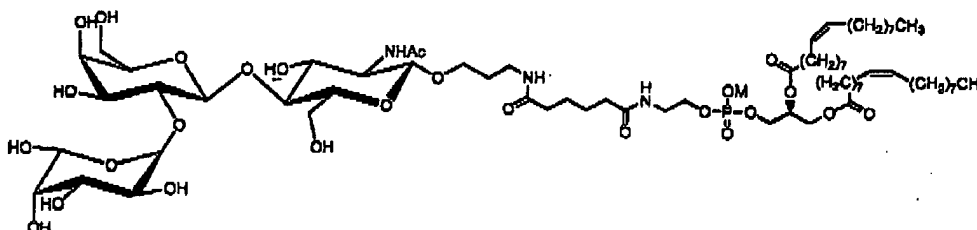
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181 (new). The method according to claim 168 where the construct is:



designated B<sub>tri</sub>-sp-Ad-DOPE (VI).

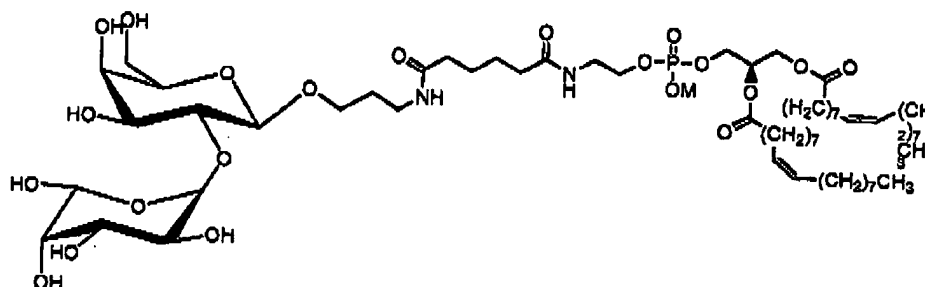
182 (new). The method according to claim 168 where the construct is:



designated H<sub>tri</sub>-sp-Ad-DOPE (VII).

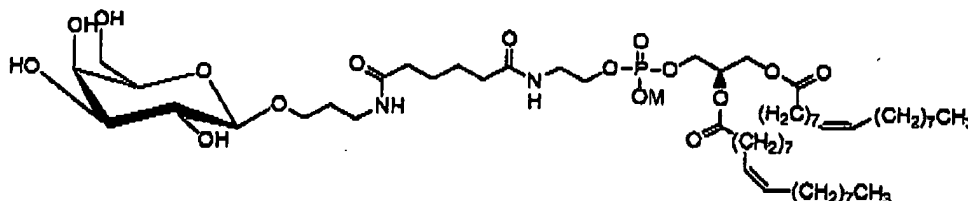
183 (new). The method according to claim 168 where the construct is:

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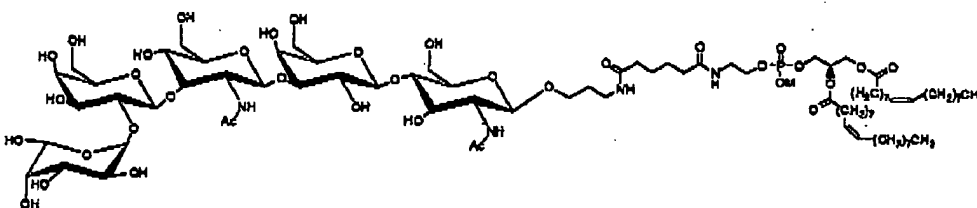
designated Hdl-sp-Ad-DOPE (VIII).

184 (new). The method according to claim 168 where the construct is:



designated Galβ-sp-Ad-DOPE (IX).

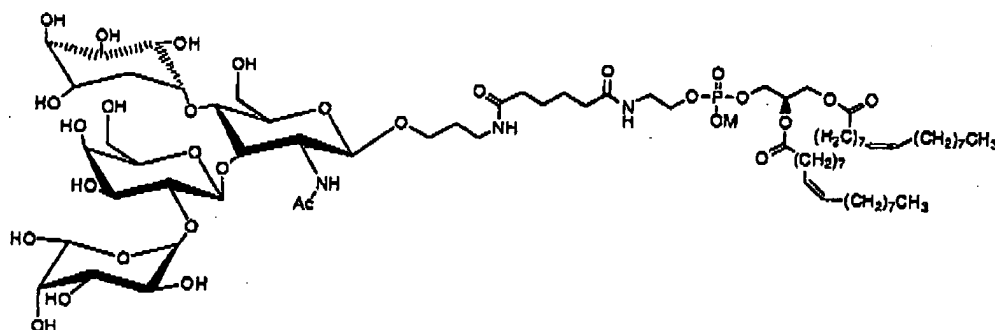
185 (new). The method according to claim 168 where the construct is:



designated Fucα1-2Galβ1-3GlcNAcβ1-3Galβ1-4GlcNAc-sp-Ad-DOPE (XII).

186 (new). The method according to claim 168 where the construct is:

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designated  $\text{Fuc}\alpha 1-2\text{Gal}\beta 1-3(\text{Fuc}\alpha 1-4)\text{GlcNAc-sp-Ad-DOPE}$  (XIII).

187 (new). The method according to claim 168 where the cell or multi-cellular structure is a red blood cell.

188 (new). The method according to claim 187 where F is a ligand for a binding molecule where the presence of the binding molecule is diagnostic for a pathological condition.

189 (new). The method according to claim 188 where F is a ligand for an antibody (immunoglobulin).